



ACTUATOR FOR DAMPERS

MODELS:
FSD-111
CFSD-222
SD-333

FIGURE 1 : SELECTION SPECIFICATIONS FOR EXTERNAL DIRECT DRIVE ACTUATORS:

ACTUATOR MODELS:

SIEMENS: GGD121.1U, GGD221.1U, GGD321.1U
SIEMENS: GGD121.1U, GND221.1U, GND321.1U
BELIMO: FSNF24, FSNF120, FSNF230

* For more actuator specification, please refer to individual spec sheet.

1. Actuator mounting locations;
Standard is right front (Optional: Left Front)
2. Sleeve lengths:
Standard is 18" shown (Optional: Specify dimension requirement above minimums)
3. Jackshaft locations:
Standard is downstream (Optional: Upstream)
4. Air flow direction: Normally jackshaft is downstream unless specified

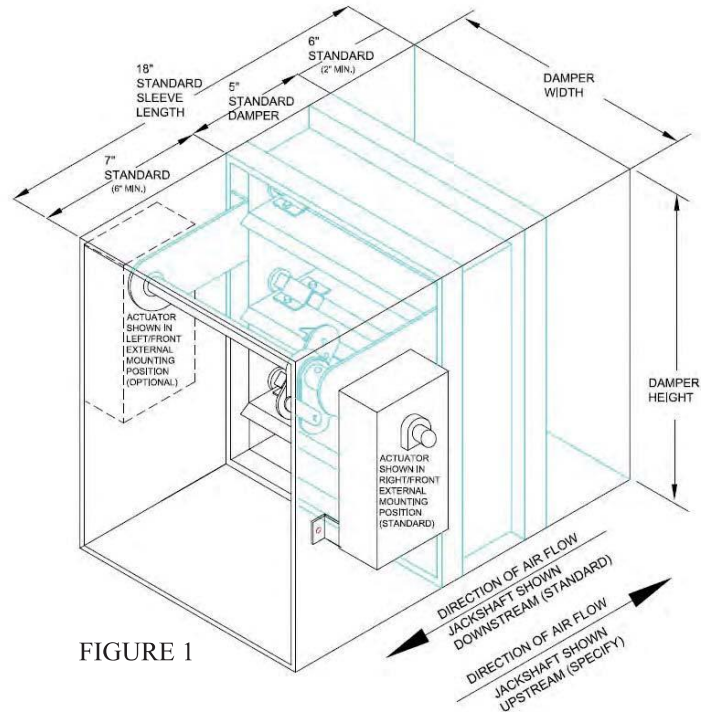


FIGURE 1

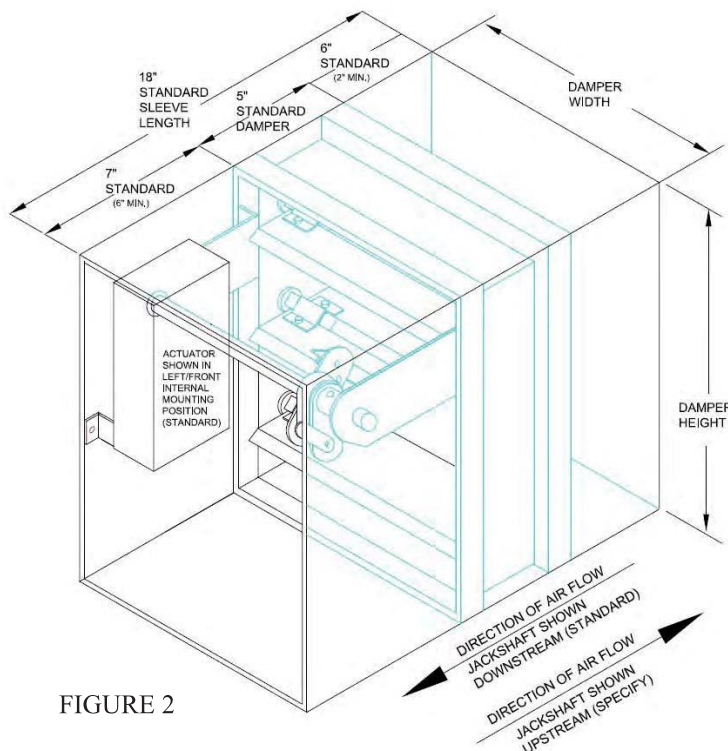


FIGURE 2

FIGURE 2: SELECTION SPECIFICATIONS FOR INTERNAL DIRECT DRIVE ACTUATORS:

ACTUATOR MODELS:

SIEMENS: GGD121.1U, GGD221.1U, GGD321.1U
SIEMENS: GGD121.1U, GND221.1U, GND321.1U
BELIMO: FSNF24, FSNF120, FSNF230

* For more actuator specification, please refer to individual spec sheet.

1. Actuator mounting locations;
Standard is left front as shown
2. Sleeve lengths:
Standard is 24" shown (Optional: Specify dimension requirement above minimums)
3. Jackshaft locations:
Standard is downstream (Optional: Upstream)
4. Air flow direction: Normally jackshaft is downstream unless specified

NOTE:
CONSULT THE FACTORY FOR MINIMUM DAMPER SIZES.



COMBINATION FIRE SMOKE DAMPER



MODELS: FSD-111-1-PB

APPLICATION

The FSD-111-1PB is a Lloyd's class 1 ultra low leakage, 1-1/2HR combination fire & smoke damper with 3 "V" blades. The FSD-111-1PB can be installed vertically or horizontally in HVAC systems and is rated for airflow and leakage in either direction. The FSD-111-1PB has been qualified with velocities to 2000 fpm and pressures to 4.0 in. w.g.

STANDARD CONSTRUCTION

FRAME:	16 ga. (1.5mm) Galvanized steel Interlocking stacked hat section Channel frame construction
BLADES :	16 ga. Galvanized 3 "V" formed Parallel Blade
BEARINGS:	Sintered Bronze, oil impregnated
AXLES:	1/2 Sq. zinc plated steel studs
LINKAGE:	0.12x0.50 zinc plated steel concealed in the channel frame
FINISH:	Mill galvanized
BLADE SEALS:	60-65 Durometer silicone rubber with laminated acrylic adhesive permanently bonded to blade edges.
JAMB SEALS:	Corrosion resistant stainless steel
JACKSHAFT:	1/2" Dia. Zinc plated steel with jackshaft connector coupling
CAULKING:	UL Approved silicone sealants: Dow corning RTV-732, 999A, GE-1200
SLEEVE:	Specify: Rectangle, round, oval or special

RATINGS

Fire rating:	1-1/2 Hours
Ultra low leakage:	Class 1
Installations:	Vertical/ Horizontal
Maximum velocity:	2000fpm
Maximum static pressure:	4.0" W.G.
Temperature rating:	250° F/350° F
Operation rating:	Power open/ Spring closure

UL CLASSIFIED: UL 555 &UL 555S

Model FSD-111-1-PB meets the requirements for fire dampers, smoke dampers and combination fire smoke dampers established by:

CSFM California State Fire Marshal
Fire Damper Listing (#3225-1417:102)
Leakage (Smoke) Damper Listing (#3230-1417:103)
New York City (MEA listing #215-99-E)
British Standard (BS – 476 Part 20)
Performance testing by AMCA International
(AMCA STD 500)
HKFM Hong Kong fire Marshal Approval



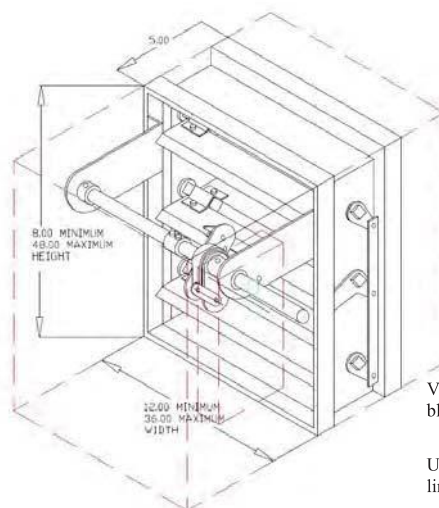
OPTIONAL MATERIAL:

Stainless steel construction

ACTUATOR:

Specify type: Electric or Pneumatic
Specify brand: SIEMENS, BELIMO
Specify mounting: External or internal
Specify voltage: 24V, 120V, 220V

Single Section		Multiple Section
Minimum Size (WxH)	Maximum Size (WxH)	Maximum Size (WxH)
8"x8"	36"x36"	72"x72"
12"x8"	30"x48"	



Vertical mount parallel blade damper shown

Used with fusible links 165°F



COMBINATION FIRE SMOKE DAMPER



MODELS: FSD-111-2-PB

APPLICATION

The FSD-111-2PB is a Lloyd's class 2 low leakage, 1-1/2HR combination fire & smoke damper with 3 "V" blades. The FSD-111-2PB can be installed vertically or horizontally in HVAC systems and is rated for airflow and leakage in either direction. The FSD-111-2PB has been qualified with velocities to 2000 fpm and pressures to 4.0 in. w.g.

STANDARD CONSTRUCTION

FRAME:	16 ga. (1.5mm) Galvanized steel Interlocking stacked hat section Channel frame construction
BLADES :	16 ga. Galvanized 3 "V" formed Parallel blade
BEARINGS:	Sintered Bronze, oil impregnated
AXLES:	1/2 Sq. zinc plated steel studs
LINKAGE:	0.12x0.50 zinc plated steel concealed in the channel frame
FINISH:	Mill galvanized
BLADE SEALS:	60-65 Durometer silicone rubber with laminated acrylic adhesive permanently bonded to blade edges.
JAMB SEALS:	Corrosion resistant stainless steel
JACKSHAFT:	1/2" Dia. Zinc plated steel with jackshaft connector coupling
CAULKING:	UL Approved silicone sealants: Dow coming RTV-732, 999A, GE-1200
SLEEVE:	Specify: Rectangle, round, oval or special

RATINGS

Fire rating:	1-1/2 Hours
Low leakage:	Class 2
Installations:	Vertical/ Horizontal
Maximum velocity:	2000fpm
Maximum static pressure:	4.0" W.G.
Temperature rating:	250° F/350° F
Operation rating:	Power open/ Spring closure

UL CLASSIFIED: UL 555 &UL 555S

Model FSD-111-2-PB meets the requirements for fire dampers, smoke dampers and combination fire smoke dampers established by:

CSFM California State Fire Marshal
Fire Damper Listing (#3225-1417:102)
Leakage (Smoke) Damper Listing (#3230-1417:103)
New York City (MEA listing #215-99-E)
British Standard (BS – 476 Part 20)
Performance testing by AMCA International (AMCA STD 500)
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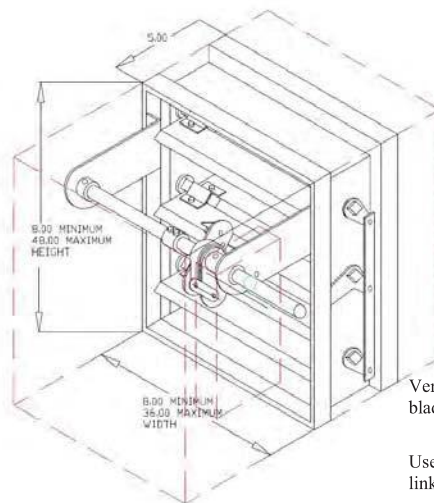
OPTIONAL MATERIAL:

Stainless steel construction

ACTUATOR:

Specify type: Electric or Pneumatic
Specify brand: SIEMENS, BELIMO
Specify mounting: External or internal
Specify voltage: 24V, 120V, 220V

Single Section		Multiple Section
Minimum Size (WxH)	Maximum Size (WxH)	Maximum Size (WxH)
8"x8"	36"x36"	72"x72"
	30"x48"	



Vertical mount parallel blade damper shown

Used with fusible links 165°F

SLEEVES FIRE/SMOKE DAMPERS

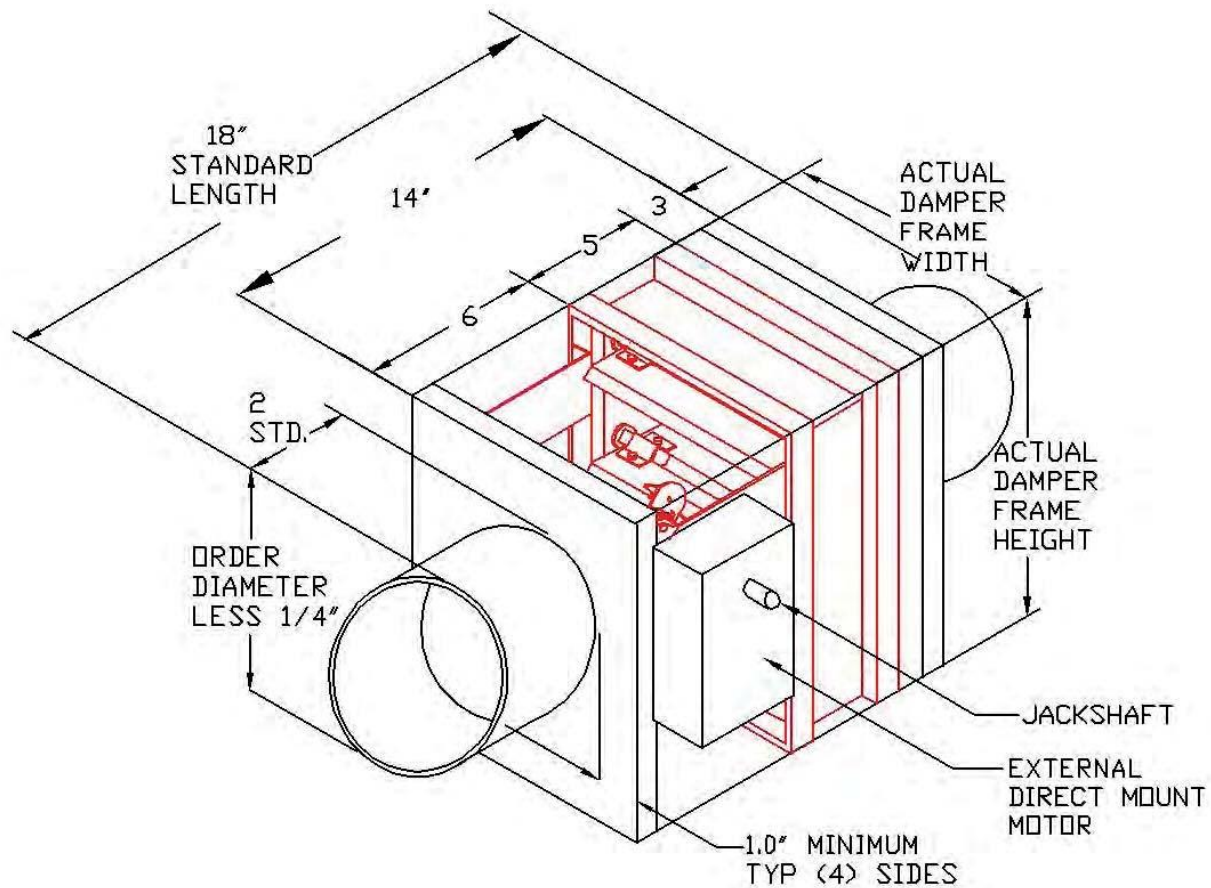
Model FSD-111, CFSD-222, SD-333

Standard sleeve sizes for dampers with external mounted actuators

Type CR-Round

Type CO Oval

Type C reduced rectangle



FSD-111-1CR round type shown

Single section size	
	Diameter
Minimum	4"
Maximum	34"



LLOYD INDUSTRIES INC.

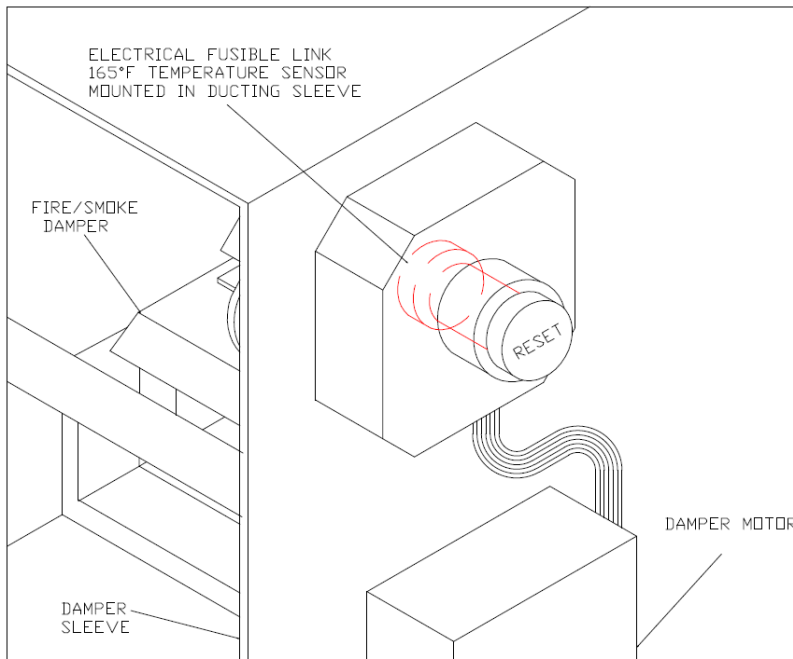
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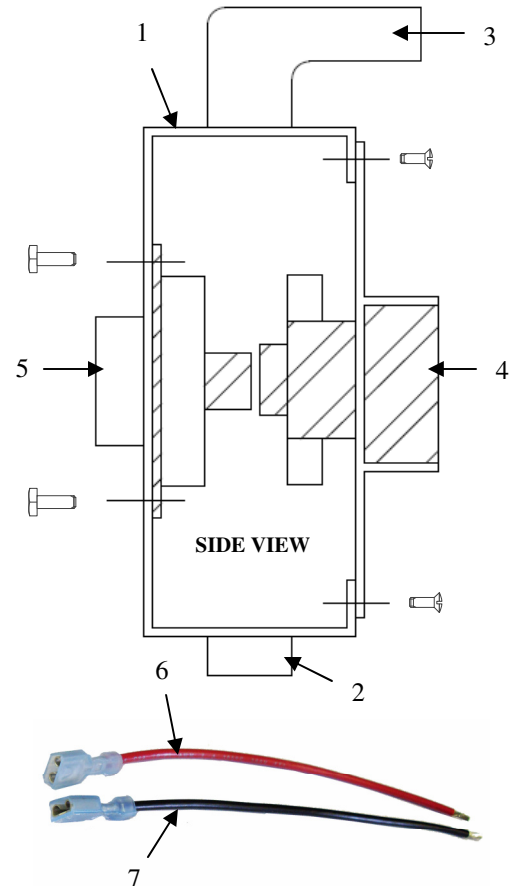
APPLICATION

The Lloydstat is an electronic fusible link that is used in conjunction with fire/smoke dampers. When it detects temperature exceeding 165°F, the damper will close and lock. Upon cessation of fire conditions the damper can be reopened by pressing the reset button.



Available combination fire/smoke dampers, smoke dampers, and corridor combination fire/smoke damper assemblies with electronic fusible link installed.

Models No: FSD-111-1-PB-LS CFSD-222-1-PB-LS
FSD-111-2-PB-LS CFSD-222-2-PB-LS



Item	QTY	DESCRIPTION
1	1	OCTAGON BOX
2	1	STRAIGHT CONNECTOR
3	1	90 DEGREE CONNECTOR
4	1	RESET BUTTON
5	1	165 D. THERMOSTAT
6	1	TERMINAL CONNECTED FEMALE WIRE (RED)
7	1	TERMINAL CONNECTED FEMALE